

PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in Shears, primarily intended for Cutting Plaster Bandages

I, ERNST AXEL JOHAN ERICSSON, of 8, Andra Langgatan, Goteborg, Sweden, a Swedish subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to plaster-bandage shears having two jaws movable mutually towards and away from each other by means of handle arms which move in planes that are substantially perpendicular to the planes in which the handle arms are located.

The present invention provides plaster-bandage shears of the above form which are characterised in that the jaw which is intended to be located inside the plaster-bandage is immovably connected to parts to which the handle-arms are pivoted, whilst the other jaw which operates from the outside of the plaster-bandage is movable alone by the handle-arms for the cutting of the plaster-bandage.

Since by this arrangement the movable jaw will not come in contact with the patient, when used for cutting bandages the cutting of the plaster-bandage will involve a minimum of pain for the patient when the fractured spot is passed by the shears. Hitherto in shears for cutting plaster-bandages the movable jaw partakes in the cutting movement which operates inside the bandage, whereby it has been hardly possible to avoid the exerting of a pressure by the inner jaw upon the part of the body on which the plaster-bandage is applied.

An embodiment of the invention is illustrated in the accompanying drawing in which Figure 1 is a plan view of the shears, Figure 2 is a side elevation thereof with the jaws in the closed position, Figure 3 is a side elevation of the foremost parts of the shears with the jaws in the open position, Figure 4 is a section on the line IV—IV of Figure 2, Figure 5 is a section on the line V—V of Figure 1 and Figure 6 is a section on the line VI—VI of Figure 2. Figures 4 to 6 are drawn on a larger scale than Figures 1 to 3.

One jaw, which in the cutting of the

plaster-bandage is designed to be placed inside the bandage, is, in its entirety, denoted by A, and the other jaw, which operates from the outside of the bandage, is, in its entirety, denoted by B. By means of a curved piece 1 the jaw A is rigidly connected with a plate 2. One side of the jaw A is formed by a surface 3 which is curved in cross-section and may come in contact with the patient in the cutting of the bandage. From said surface 3 a plate 4 projects, said plate having a decreasing height towards the extreme end of the jaw. The plate 4 on the side opposite to the surface 3 forms two edges 5 with which sharp edges 6 of the other jaw B co-operate in the cutting of the plaster-bandage. The jaw B has substantially the shape of a guard, the shanks of which embrace the plate 4, and the foremost end 23 of which is closed. Said shanks 8 are substantially wedge-shaped in cross-section as shown by Figures 5 and 6, so that each shank of the guard at one side forms the edge 6 which extends along the plate 4. From the side, the shanks of the guard are angular, each shank being formed by the portion 8 extending along the plate 4 and carrying the edge 6, as well as by an arm or extension 9 forming an obtuse angle to the portion 8. Where the portions 8 and 9 merge into each other, the two shanks of the guard are connected with each other by means of a pin 10 extending through an oblong hole 11 in the piece 1. The guard-shaped jaw B by means of a pin 12 extending through the extreme ends of the arms 9 is connected with one end of one link, or, as shown in the drawing, two links 13, the other ends of which by means of a pin 14 are connected with the piece 1. The two links 13 are provided on each side of the piece 1 and extend into the intermediate space between the arms 9. One end of a bar 16 is connected with the pin 12, said bar along a portion of its length being provided with a series of teeth on two opposite sides (Figure 4) engaging with a toothed wheel or a segment of such wheel 18 upon one end of an arm 20 with handle 19. Said wheels are pivotable

each about a pin 21 which also hold the plate 2 in a determined distance from a second plate 22. Between these plates the toothed segments 18 and the toothed bar 16 are provided.

The pivot pins 21 of the toothed segments 18 or the arms 20 respectively are positioned in planes which are substantially parallel to the planes in which the mutual movement of the jaws A, B takes place, that is to say, the last-mentioned planes form substantially right angle to the planes in which the arms 20 are swung. The cutting of the plaster-bandage in most cases takes place in vertical cutting planes. Thus, the handle arms will be swung in substantially horizontal planes which facilitates the work.

In the opening of the jaws, the handle arms 20 are swung so that the toothed bar 16 is pulled backwards towards the handles 20, whereby the jaw B by the guiding of the pin 10 in the oblong hole 11 will be pulled away from the jaw A at the same time pivoting about the pin 10 so that the foremost end 23 of the jaw B will be swung out from the jaw A as shown in Figure 3. The cutting proper is effected when the toothed bar 16 is pushed out from the plates 2, 22 (the arms are swung towards each other), whereby the jaw B will effect the same movement as above mentioned though in opposite direction, so that the sharp edges 6 cut off the material in co-action with the edges 5 of the plate 4.

As is evident by the above description the jaw A operating inside the plaster-bandage will not effect any cutting movements which are effected exclusively by the jaw B operating from the outside of the bandage.

The invention is not restricted to the embodiment above described and shown in the drawing. For instance, it is not necessary to connect the movable jaw B with the handle arms by means of a toothed bar and toothed segments. A link-connection (or a ball-joint) may be used for the same purpose. It is also not necessary to connect the rigid or immov-

able jaw and the movable jaw by means of links 13. Such links may also be absent though the toothed bar 16 or corresponding means in such a case will be exposed to greater strains in the operation of the shears.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Plaster-bandage shears having two jaws movable mutually towards and away from each other by means of handle arms which moves in planes that are substantially perpendicular to the planes in which the handle arms are located, characterised in that the jaw which is intended to be located inside the plaster-bandage is immovably connected to parts to which the handle-arms are pivoted, whilst the other jaw which operates from the outside of the plaster-bandage is movable alone by the handle-arms for the cutting of the plaster-bandage.

2. Plaster-bandage shears as claimed in Claim 1, wherein the movable jaw is connected by means of one or more links with the immovable jaw and with the handle-arms by means of a device for transmitting motion from said arms to the movable jaw.

3. Plaster-bandage shears as claimed in Claim 2, wherein the device for the transmission of motion from the handle-arms to the movable jaw comprises toothed wheels or segments connected to the handle-arms and each engaging with a toothed bar which is connected with the movable jaw.

4. Cutting shears constructed substantially as herein described with reference to the accompanying drawing.

Dated this 23rd day of December, 1936.
KINGS PATENT AGENCY LIMITED,

By BERTRAM T. KING,

Director,

Registered Patent Agent,
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E.C.4,

Agents for the Applicant.

[This Drawing is a reproduction of the Original on a reduced scale.]

